



5 METHOD AND APPARATUS FOR VERIFYING THE INTEGRITY AND SECURITY OF
COMPUTER NETWORKS AND IMPLEMENTATION OF COUNTER MEASURES

10 FIELD OF THE INVENTION

This invention relates to a method and apparatus for verifying the integrity of a computer security subsystem for preventing attacks on computer network security systems.

15 BACKGROUND OF THE INVENTION

Concurrent with the rise in connectivity among diverse computer networks and the corresponding increase in dependence on networked information systems, there has been a dramatic increase in the need for robust security to enforce restrictions on access to and prevent intrusion on secure systems. The topology of the interconnected networks has also grown increasingly complex, and often involves open networks such as the internet that expose secure systems to increased threats of attack. Consequently, no single solution has yet been proposed that addresses all current needs for intrusion detection and response. Instead, a vast assortment of security devices and techniques has evolved and has generally been implemented differently on individual systems. This has resulted in a global security patchwork, inherently susceptible to attack and to individual systems which themselves implement a hodge podge of different security devices and techniques.

Attempts to gain unauthorized access to computer networks capitalize on inherent loopholes in a network's security topology. It is known, for example, that although a secure system connected to the internet may include firewalls and intrusion detection systems to prevent unauthorized access, weaknesses in individual security components are often sought out and successfully exploited. The rapid introduction of new